## **Abstract**

Stem cells from human sources can have a variety of useful applications in disease treatment and biotechnology. More particularly the umbilical cord matrix stem (UCMS) cell cultures of the invention have a variety of totipotent, pluriotent, or multipotent cells for a variety of end uses from a non-controversial, universally available, species-specific source. The technology can have application to any placental animal, including agricultural and laboratory animals and humans. The invention relates to isolating, culturing the stem cells, maintaining the stem cells, transforming the stem cells into useful cell types using genetic or other transformation technologies, stem cell and tissue banking and using untransformed or transformed cells in disease treatment.

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